CLAIMS

Sub A1

1. A composite intended for medical use, in particular surgical or therapeutic use, characterized in that it comprises
- a thermoplastic component plasticizable within the temperature range -10 °C...+100 °C, which is substantially made up of hydroxy acids and structural units derived from hydroxy acid derivatives, and the molar mass of which is within the range 10,000 - 1,000,000 g/mol, and which degrades in the body typically within a period ranging from a few days to several years, and which in its solid state is a mechanically strong plastic or rubbery material, and
- a bioactive component, which is a bioactive glass, a bioactive xerogel, a bioactive ceramic material, coral or a coral-based product, or a bioactive glass ceramic material.

2. The composite according to Claim 1, characterized in that the plastic component is plasticizable within the temperature range 5 °C...70 °C, preferably within the temperature range 37 °C...55 °C.

3. The composite according to Claim 1 ~~or 2~~, characterized in that the plasticized plastic component remains moldable for a certain period even after the temperature of the composite has been lowered to a temperature which is considerably lower than the setting temperature of the said plastic component.

3 4. The composite according to Claim 1, ~~2 or 3~~, characterized in that the plastic component is biodegradable in a controlled manner within the time range 1 week - 3 years.

4 5. The composite according to Claim 3 4, characterized in that the structural unit is an L-, D- or DL-lactic acid; an L-, D- or DL-lactide; or epsilon-caprolactone.

5. The composite according to Claim 4, characterized in that the plastic component is a copolymer based on structural units of L-lactide and epsilon-caprolactone.

6. The composite according to Claim 5, characterized in that the composition of the copolymer is within the range

$$\frac{\text{epsilon-caprolactone}}{\text{L-lactide}} = 2/98 \ldots 98/2$$

7. The composite according to Claim 6, characterized in that

$$\frac{\text{epsilon-caprolactone}}{\text{L-lactide}} = 4 : 1$$

8. The composite according to Claim 7, characterized in that the molar mass of the copolymer is approx. 30,000 - 300,000 g/mol.

9. The composite according to Claim 1, characterized in that the bioactive component is present as separate particles in the composite.

10. The composite according to Claim 9, characterized in that the separate particles are fibers, porous pieces, microparticles or glass beads.

11. The composite according to Claim 1, characterized in that the plastic component and/or the bioactive component contains one or more additives.

12. The composite according to Claim 1, characterized in that the plastic component and the bioactive component form a dense piece.

13. The composite according to Claim 1 ~~any of Claims 1 - 12~~,

characterized in that the plastic component forms a porous piece.

15. A blend intended for the preparation of a composite according to ~~any of Claims 1 - 14~~, characterized in that the plastic component and the bioactive component in the blend are in powder form.

16. A coating, membrane, net, powder, fiber, thread, adhesive, or a piece such as a plate, bead, tube, nail or rod, prepared from the composite according to ~~any of Claims 1 - 14~~.

17. The use of a composite according to ~~any of Claims 1 - 14~~ for the preparation of any of the following products:
- a bone or cartilage application, such as a filling material for bone or cartilage, a product intended for the repairing of long bones, a plate for the repairing of the back of the eye or facial bones, a bone cement, an adhesive for joining the product to a tissue or tissues, an implant coating, a piece for the repairing of the vertebral column, and a skull plate,
- a tooth or jaw application, such as a temporary tooth filling material, a temporary or permanent tooth root filling material, a parodontal product, a product to be placed in the cavity left by an extracted tooth, a tooth cement, a temporary tooth cement, a temporary crown material, a tooth implant coating, an occlusion index rail, a surgical paste, and a template material, which may be, for example, a paste, ring or thread to be fitted in a gingival pocket,
- a cartilage coating,
- a tissue guiding membrane or tube,
- a protective cloth, a wound dressing, or an adhesive tape,
- a carrier for an active agent, such as a drug, or for some other biological structure.